



## What should a website dedicated to the postnatal period contain? A Delphi survey among parents and professionals



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### ABSTRACT

**Objectives:** Mothers have a great need for information during the postnatal period. Trying to meet this need, mothers are increasingly turning to the Internet. Nevertheless, many women have stated that they often or always found that the information that they found on the Internet was incomplete or wrong. Many women therefore believe that health professionals should suggest reliable Internet websites for new mothers. The aim of this study was therefore to find a consensus on the content of a reliable and centralized website dedicated to mothers from the end of pregnancy to 1 year after childbirth.

**Design:** Two rounds of an online Delphi survey were used in this study.

**Setting and participants:** The panel of participants involved in the survey included parents (both mothers and fathers) and professionals (health professionals and professionals of early childhood for mothers of children aged 0 to 2 years).

**Findings:** Ninety-six parents and professionals participated in the first round ( $37.7 \pm 9.76$  years; 84.4% of women) and 78 in the second round. The majority of participants (94.6%) thought that a centralized website could help mothers from pregnancy to one year after childbirth. The content that the experts would like to find on a website were themed into five categories: “infants’ information”, “parents’ information”, “administrative information”, “professionals’ information” and “type of resources”. In each category, experts highlighted the key words that they found important and should be reported on the website. The most important items highlighted by participants were baby’s feeding/breastfeeding (92.8%), babies’ needs (84.1%), baby blues (77.9%), postpartum depression (72.1%), management of the couple’s relationship (72.1%), women’s right to postnatal care (83.6%), links to reliable documents (63.9%) and a list of useful contacts (52.5%).

**Conclusions:** This study helped to understand the questions that mothers ask themselves during the postpartum period and provided priorities to respond to their questions in the process of developing a website.

### Introduction

The decision to have a baby brings significant change to a woman's life. The transition to motherhood is a potentially vulnerable time for mothers' mental health (Faisal-Cury et al., 2008; Gavin et al., 2005;

Monti et al., 2008; Henderson, 2015). Women often have many fears and anxieties regarding early motherhood and their changing role (Forster et al., 2008). The first weeks and months after childbirth also create new needs for mothers. A previous study performed in our department (Slomian et al., 2017c) evaluated the needs of mothers in

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the first year after childbirth. Four categories of needs were highlighted: a need for information, need for psychological support, need to share experiences and need for practical and material support. Indeed, the need for information after childbirth seems to be omnipresent (Emmanuel et al., 2001; Sword and Watt, 2005). After childbirth, 9 out of 10 women admitted to searching for information about themselves or about their baby (Slomian et al., 2017a). New mothers felt unprepared for the realities of motherhood (especially women having their first baby) (Carolan, 2007; Deave et al., 2008; Javadifar et al., 2016) and searched for reliable and realistic information. During the first year after childbirth, women need to be surrounded, reassured and understood (McKellar et al., 2006; Hildingsson, 2007). They need to find information to be better prepared for this difficult period of life to comfort them and, particularly, to know if they are doing well as mothers and to find out if what they are experiencing is normal.

In an effort to meet their information needs during the postnatal period, mothers are increasingly turning to the Internet (Romano, 2007; Lagan et al., 2011). Nevertheless, many women have stated that they 'often' or 'always' found that the information that they found on the Internet was incomplete or wrong (Slomian et al., 2017a). Women also seem to use the Internet to make decisions and manage their postpartum period (Forkner-Dunn, 2003; Dickerson et al., 2004; Lagan et al., 2010; Slomian et al., 2017a). Some studies have demonstrated that information and communication technologies (ICT) could be effective in the management of the postpartum period (Lindberg et al., 2009; Salonen et al., 2011; Danbjørg et al., 2015). Many women therefore believe that health professionals should suggest reliable Internet websites for new mothers (Slomian et al., 2017a). Given the recent evidence supporting this claim, our department conducted focus groups to try to find one or more adapted technological solutions to meet the needs of mothers during the first year following childbirth (Slomian et al., 2017b). The results showed that although the human and psychological components remain very important in the postpartum period, ICT and new technologies could be a great ally for meeting the needs of mothers during the postpartum period as well as to reliably inform mothers. At the end of this study, we decided to explore and test one of the technologies discussed during the focus group, especially to meet the information need of mothers. We therefore chose to develop a centralised website dedicated to mothers from the end of pregnancy to 1 year after childbirth.

Given the responses in the second phase of the study, it indicated that the development of a centralised website dedicated to mothers during the postnatal period is not simple. The content must be accurately defined to answer mothers' needs. Hence, in the same way that it is important to respect the content validity in the development of questionnaires (Terwee et al., 2007), we think that it is important to include future users during the development of a website (users' experiences methods) to better meet their expectations and needs. The aim of this study was therefore to find a consensus about the content that users would like to find on a centralised website dedicated to mothers from the end of pregnancy to 1 year after childbirth.

## Methods

### Study design

We conducted an online Delphi consensus process to identify the main items and resources to include on a website dedicated to mothers and to try to meet their needs. The Delphi method (developed by the RAND Corporation) is a prospective method that consists of consulting a panel of experts in an iterative way. A typical Delphi method utilises a series of at least two rounds of questions until a consensus is reached. After each round, a synthesis of the results is used as the basis for drafting the following questionnaire, allowing for 'controlled feedback'. This study received ethics approval from the 'Comité d'Ethique Hospitalo-Facultaire Universitaire de Liège' under the number 2015/48.

### Participants

In this study, we consider the views of parents (both mothers and fathers) and professionals. The professionals included in this study were health professionals and professionals of early childhood serving mothers of children aged 0 to 2 years. The categories of professionals included in this study were: gynecologists, midwives, pediatricians, general practitioners, psychologists, Medical-Social Worker of the ONE ('Office de la Naissance et de l'Enfance': Belgian Office of Birth and Childhood), nursery nurses and physiotherapists. Some technological experts were also invited to participate in this Delphi survey.

There are no clear recommendations regarding the number of participants required to construct a representative sample for a Delphi survey. This number generally varies between 8 and 20, but can also reach a few hundred participants (Keeney et al., 2011; Cadorin et al., 2017). As the aim of this study was to identify the main items that should be found on a website dedicated to mothers, we choose to include a large sample of people and hoped to include at least 60 participants (almost 30 parents and 30 professionals). Therefore, we invited a large number of experts, both parents and professionals, to participate in our Delphi survey. Professionals were contacted on account of their specialty. The professionals' e-mail addresses were collected from the two largest hospitals in the city of Liège (Belgium) as well as from professionals who had previously been in contact with our research team and who matched the inclusion criteria. Parents were contacted to participate in the study if they already had at least one child or will have one (pregnancy). Parents' e-mail addresses were collected from parents who had previously been in contact with our research team and who matched the inclusion criteria as well as by word of mouth. All of the invited experts had the ability to nominate additional participants. In addition, the experts who were interested in the study – and who were not yet invited to participate in the study – could send an e-mail to the research team. After evaluating the expertise of the candidate, researchers added these new experts to the survey.

### Delphi survey

The process used in this study included two phases, which were conducted between 19 June 2016 and 30 September 2016 using the Mesydel® Software:

**Phase 1** (19 June 2016): Participants were asked to evaluate the interest of such a website for mothers and to comment with their opinion. Then, the experts were asked to evaluate the interest of such a website to professionals serving mothers of children aged 0–2 years and to comment with their opinion. We also asked participants to describe the content that they would like to find on such a website. Finally, experts were asked to list the existing websites on which they could find reliable information and to mention which of these websites they already recommended to mothers and/or professionals.

**Phase 2** (22 August 2016): First, we shared a synthesis of the results of the first survey with the participants. The content that the experts would like to find on a website was distributed in five categories (infants, parents, administrative, professionals and resources). In each of these categories, a list of key words was constructed regarding the responses to Phase 1 of the Delphi survey.

For the first four categories (infants, parents, administrative and professionals), participants were asked to decide if it is very important, important, not very important or not important at all. The panel was then asked to highlight, in each category, all of the key words that they find important to report on a website. Participants also had the opportunity to add items if they did not find them in the list of key words. For the fifth category, experts were asked to select at least 3 resources that they would like to find on a website. They also had the opportunity to add some resources if they did not find them in the presented list. Finally, all of the websites that the experts said that they

had previously recommended to mothers and/or professionals were presented in a list. Participants were therefore asked to identify the websites which could be recommended on the website but also the websites which could not be recommended on the website.

**Instrument**

The Delphi survey was conducted using the Mesydel® Software (<https://mesydel.com/en>) which is ‘a computer tool aimed at faithfully implementing a large subset of the features of a Delphi survey, including the collection of data, multiple rounds of questionnaires, address book management, treatment and analysis of qualitative and quantitative questions, and dedicated analysis tools. The computerization of the Delphi method helps to reduce the attrition rate regarding the collection of answers. With respect to the analysis of qualitative answers, Mesydel® proposed a system of ‘tagging’, which is based on the precepts of the ‘grounded theory’ Quantitative answers, in turn, can be analyzed via charts. However, in line with the philosophy of never letting the software make decisions in the place of the researcher, analysts are free to use or not the analytical tools that the software makes available’. An illustration of the Delphi method used by the Mesydel® Software is presented in Fig. 1.

**Data collection**

The participants’ e-mail addresses were imported into the Mesydel® Software. For Phase 1, an initial e-mail including the link to access the Delphi survey was sent to 171 experts. We collected the e-mail addresses and invited 46 other experts who were nominated by other participants or who were interested in the study. Each time an expert replied to the survey, his answers appeared directly on the Mesydel® Software. Three reminders were sent, every two weeks, only to the experts who had not yet participated. After the analysis of the results of the first round, the questionnaire of the second round was constructed. Participants therefore received another e-mail including the link to access Phase 2 of the Delphi survey. In the same manner as Phase 1, four reminders were sent, every two weeks, to the experts who had not yet participated. A diagram of the Delphi process used in this study is presented in Fig. 2.

**Data analysis**

Descriptive statistics were used to evaluate the characteristics of the Delphi survey’s participants. The mean and standard deviation were used to present the age, and absolute and relative frequencies were used to present the categorical variables (sex, number of children, age

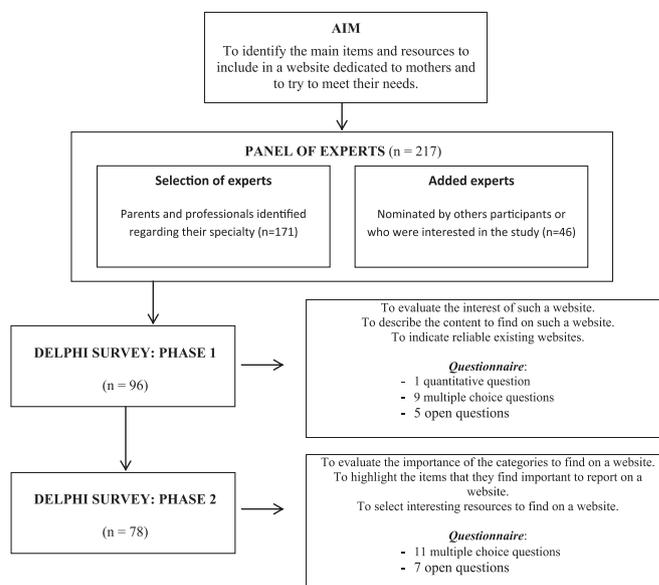


Fig. 2. Diagram of the Delphi process including the experts’ selection.

of the last child, expert’s title for the study and profession). Analysis of the experts’ answers during the first round was of a qualitative nature. This analysis allowed us to create a list of items to be submitted for evaluation in the second round. Therefore, the analysis of the experts’ answers during the second round was mainly of a quantitative nature (absolute and relative frequencies). In addition, another qualitative analysis was used when participants had the opportunity to add items if they did not find them in the submitted list.

**Findings**

**Participants**

A total of 217 experts were invited to participate in the Delphi survey: 96 (44.2%) participated in the first round and 78 (35.9%) participated in the second round. Among the study population, 20 respondents considered themselves to be both a parent and professional. The characteristics of the Delphi survey respondents are presented in Table 1.

**Delphi survey: Phase 1**

The majority of the participants (94.6%) thought that a centralised website could help mothers from pregnancy to the first year after childbirth. The main reasons participants gave to justify this interest were that such a website could answer many questions that mothers (and parents) ask themselves (28 tags); solve the problem of the number of unreliable websites (21 tags); centralise professionals’ efforts and all of the reliable websites that already exist (18 tags); provide reliable and objective information (16 tags); quickly deliver answers to mothers (12 tags); help to reduce stress and overload (11 tags); help mothers to easily find local resources (e.g., professionals or associations; 10 tags); and be a good way to manage the postpartum period because the Internet has become the first step to find information (10 tags) and it is now accessible to a very large panel of persons (9 tags). The main reasons given by the participants who did not understand the interest in such a website were that there are already many websites (2 tags); that the mothers do not have the time to search the Internet (2 tags); that mothers rather require a human presence (family, friend or other mothers; 2 tags); and that this website could be unsafe because the interpretation of the information by the mothers depends on their emotional status (1 tag).

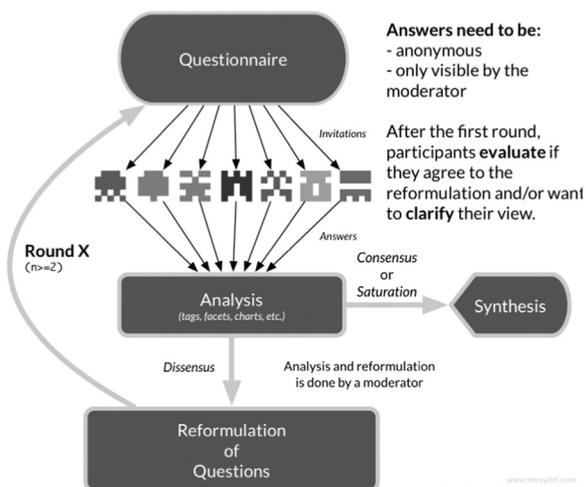


Fig. 1. Illustration of the Delphi method (<https://mesydel.com/en>).

**Table 1**  
Characteristic of the study population during the Delphi survey's first round.

Characteristic	Total population (n=96)
<b>Age (mean ± SD; years)</b>	37.7 ± 9.76
<b>Sex</b>	
Women	81 (84.4%)
Men	15 (15.6%)
<b>Number of children</b>	
0	15 (15.8%) <sup>*</sup>
1 (including pregnancy in progress)	26 (27.4%) <sup>*</sup>
2	33 (34.7%) <sup>*</sup>
3	13 (13.7%) <sup>*</sup>
4	6 (6.3%) <sup>*</sup>
5 or more	2 (2.1%) <sup>*</sup>
<b>Age of the last child</b>	
< 2 years	32 (40.5%) <sup>†</sup>
≥ 2 years	47 (59.5%) <sup>†</sup>
<b>Title for the study</b>	
I identify myself as a parent	55 (57.9%)
I identify myself as a health professional	51 (53.7%)
I identify myself as an early childhood professional	13 (13.7%)
<b>Profession</b>	
Midwife	32 (34.4%) <sup>§</sup>
Gynecologist	8 (8.6%) <sup>§</sup>
Pediatrician	4 (4.3%) <sup>§</sup>
Psychologist	7 (7.5%) <sup>§</sup>
Nursery nurse	1 (1.1%) <sup>§</sup>
Physiotherapist	2 (2.2%) <sup>§</sup>
General practitioners	0 (0.0%) <sup>§</sup>
Medical-social worker	0 (0.0%) <sup>§</sup>
Expert in technologies	5 (5.4%) <sup>§</sup>
Parent (whose profession is not one of those mentioned above)	34 (36.6%) <sup>§</sup>

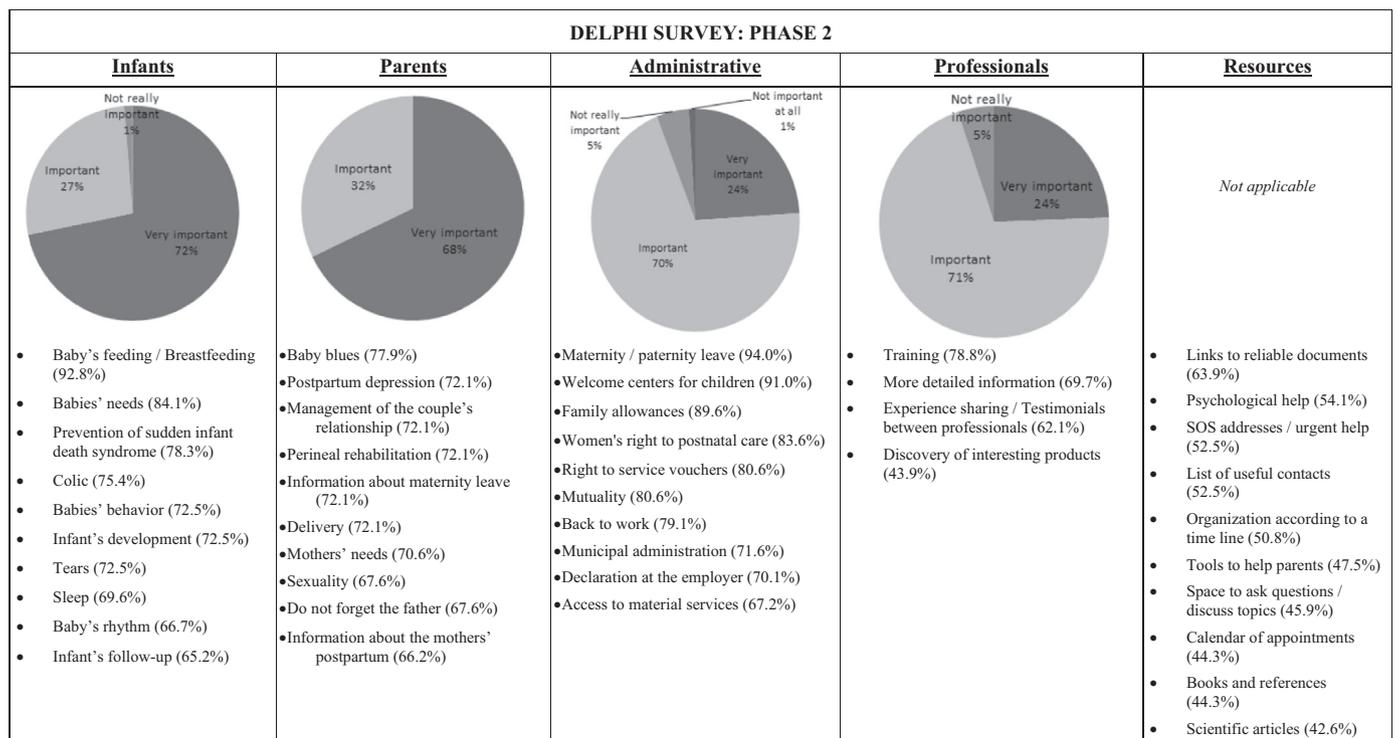
\*\*\*\* n = 42;  
\*\*\*\*\* n = 54.  
\* n = 95.  
† n = 79.  
§ n = 93.

Many respondents (79.3%) also thought that a centralised website could help professionals serving mothers of children aged 0 to 2 years. The main reasons that participants gave to justify this interest were that such a website could improve the care given to mothers (16 tags); help professionals to better target mothers' expectations and needs (16 tags); contribute to updating the data necessary for clinical practice (12 tags); be a reference to give to mothers (11 tags); and be a useful tool to guide mothers to reference people or associations (10 tags). The main reason given by the participants who did not understand the professional's interest in such a website was that professionals already know the information that should be given to mothers (6 tags).

All of the tags highlighted by the description of the content that participants would like to find on a centralised website were listed during the Phase 1 of the Delphi survey. All of these tags were distributed in five categories: 'infants' information', 'parents' information', 'administrative information', 'professionals' information' and 'type of resources'. All of the tags for each of these categories were listed as key words to be submitted for the experts' review during the Delphi survey's second round. In addition, when asked if they know reliable websites that provide information about the postnatal period, 63.5% of respondents said 'no' (64.6% of parents versus 60.4% of professionals). Participants who know reliable websites (23.5%) quoted 16 websites that they found to be reliable and have already recommended to mothers and/or professionals. All of these websites are listed in French.

*Delphi Survey: Phase 2*

The importance of the first four categories constructed during the analysis of the Delphi Survey's first round was evaluated by the participants. All of these categories were mainly estimated as very important (infants: 71.8%; parents: 67.9%; administrative: 22.4%; professionals: 24.4%) or important (infants: 26.9%; parents: 32.1%; administrative: 60.5%; professionals: 70.5%). For all of the categories – except for the professionals' category (only 4 tags) – the ten most selected tags that the panel deemed important to report on a website are shown in Fig. 3. The participants were given the opportunity to add



**Fig. 3.** : Data extraction of the Delphi survey's first and second rounds.

items that were not reported in the category list. The analysis of this part of the results did not show new results. Only 5 websites that were considered to be reliable were selected to be important to be listed on a centralised website by more than 50% of the participants. No additional website appeared in the second round of the Delphi Survey.

## Discussion

The aim of this study was to reach a consensus about the content that should be found on a centralised website dedicated to mothers from the end of the pregnancy to 1 year after childbirth. The need to provide information to mothers is overtly present during the postpartum period (Emmanuel et al., 2001; Sword and Watt, 2005; Carolan, 2007; Deave et al., 2008; Forster et al., 2008; Javadifar et al., 2016). Women also cope with their new role as mothers (Forster et al., 2008) and should be surrounded and reassured during this difficult period of life (McKellar et al., 2006; Hildingsson, 2007). In addition, in various countries, health authorities have decided, mainly for economic reasons, to reduce the length of stay in maternity units after childbirth (Benahmed et al., 2014). This decision may increase mothers' needs according to some feelings of a lack of support, of abandonment or of loneliness.

The Delphi survey used in this study showed the interest of participants regarding a centralised website. Indeed, the majority of participants (94.6%) found it important to develop such a tool to help mothers in the postnatal period. In addition, the Delphi survey highlighted the key priorities in the process of the website development. The two most important categories to find on a website according to respondents are the infants' and parents' information categories. Administrative information was also seen to be important to include on a website. The participants also proposed a 'professionals' information category', however we felt this fell outside of the parameters of this study.

A previous survey conducted in our department evaluated whether mothers used the Internet as a source of information to meet their need for information after childbirth (Slomian et al., 2017a). To the best of our knowledge, this is the only study that has assessed the use of the Internet as a source of information after childbirth. This study showed that 90.5% of women sought information about themselves or about their baby during the postpartum period. The most searched topics about the mother-related postpartum period were breastfeeding, bottle feeding, sexuality, weight loss, and the item 'others' including, for example, resumption of menses, baby-blues, postpartum depression, caesarean section, pain or tiredness. The most searched topics about infant health were foods to introduce into the child's diet, breastfeeding, teeth, peaks of growth, infant acne and bottle feeding. These results largely correspond to the results of the Delphi Study described in this paper and reinforce the findings of our previous study. Nevertheless, some topics seem to be important for many participants while they were not highlighted in our previous web-based survey. These topics are, for example, the prevention of sudden infant death syndrome, colic, perineal rehabilitation, important role of the father or all administrative information.

## Strengths and limitations

The strengths of this study are the robust methodology and number of participants ( $n_{\text{phase1}} = 96$ ;  $n_{\text{phase2}} = 78$ ). We used an iterative Delphi process and included all of the experts who were able to provide relevant opinions on the questions that mothers asked themselves during the postnatal period. Participants seemed to be very interested in the development of a centralised website dedicated to mothers from the end of the pregnancy to 1 year after childbirth. Thus, their answers were varied and very interesting and provided rich results. The limitation of this study is that the only way to contact the experts to participate in the survey was by email, reducing the amount of demand for participation. To reduce this limitation, we decided that all of the

invited experts had the ability to nominate additional participants but also that the experts who were interested in the study – and who were not yet invited to participate in the study – could send an e-mail to the research team. After validating the expertise of the candidates, researchers added these new experts to the survey. Nevertheless, this limitation allowed the research team to control the expertise of all of the participants included in the Delphi survey. Finally, it is important to underline that all the participants were parents who had a baby in Belgium or professionals who were practicing in Belgium which limits the extrapolation of our results to the mothers' needs in Belgium only. It could therefore be interesting for further researches to target this kind of information to women's particular needs in other country.

## Conclusion

Mothers have a great need for information and support during the postnatal period. This study helped to understand the questions that mothers ask themselves during this period and indicated the information that is important for women to be able to access at this time. The results of this study support the need for a website with targeted information that prioritises women's particular needs. A French version of this website will be developed by our research team and should be tested in a large population of new mothers.

## Conflict of interest

JS, PE, LV, JYR and OB declare that they have no conflict of interest. ME is the designer of the Mesydel® Software which was used in this study.

## Ethical approval

This study received ethics approval from the 'Comité d'Ethique Hospitalo-Facultaire Universitaire de Liège' under the number 2015/48.

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## Clinical trial registry and registration number

Not applicable.

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## References

- Benahmed, N., Devos, C., San Miguel, L., Vinck, I., Vankelst, L., Lauwerier, E., Verschuere, M., Obyn, C., Paulus, D., Christiaens, W., 2014. KCE Reports 232B: Caring for mothers and newborns after uncomplicated delivery: towards integrated postnatal care.
- Cadorin, L., Bagnasco, A., Tolotti, A., Pagnucci, N., Sasso, L., 2017. Developing an instrument to measure emotional behaviour abilities of meaningful learning through the Delphi technique. *Journal of Advanced Nursing*. <http://dx.doi.org/10.1111/jan.13273>.
- Carolan, M., 2007. Health literacy and the information needs and dilemmas of first-time mothers over 35 years. *Journal of Clinical Nursing* 16, 1162–1172. <http://dx.doi.org/10.1111/j.1365-2702.2007.01600.x>.
- Danbjørg, D.B., Wagner, L., Kristensen, B.R., Clemensen, J., 2015. Intervention among new parents followed up by an interview study exploring their experiences of telemedicine after early postnatal discharge. *Midwifery* 31, 574–581. <http://dx.doi.org/10.1016/j.midw.2015.02.007>.
- Deave, T., Johnson, D., Ingram, J., 2008. Transition to parenthood: the needs of parents in pregnancy and early parenthood. *BMC Pregnancy and Childbirth* 8, 8–30. <http://dx.doi.org/10.1186/1471-2393-8-30>.
- Dickerson, S., Reinhart, A.M., Feeley, T.H., Bidani, R., et al., 2004. Patient Internet use

- for health information at three urban primary care clinics. *Journal of the American Medical Informatics Association* 11, 499–504. <http://dx.doi.org/10.1197/jamia.M1460>.
- Emmanuel, E., Creedy, D., Fraser, J., 2001. What mothers want: a postnatal survey. *Australian Journal of Midwifery: Professional Journal of the Australian College of Midwives Incorporated* 14, 16–20.
- Faisal-Cury, A., Menezes, P.R., Tedesco, J.J., Kahalle, S., Zugaib, M., 2008. Maternity “blues”: prevalence and risk factors. *Spanish Journal of Psychology* 11, 593–599.
- Forkner-Dunn, J., 2003. Internet-based patient self-care: the next generation of health care delivery. *Journal of Medical Internet Research* 5, e8. <http://dx.doi.org/10.2196/jmir.5.2.e8>.
- Forster, D.A., McLachlan, H.L., Rayner, J., Yelland, J., Gold, L., Rayner, S., 2008. The early postnatal period: exploring women's views, expectations and experiences of care using focus groups in Victoria, Australia. *BMC Pregnancy and Childbirth* 8, 8–27. <http://dx.doi.org/10.1186/1471-2393-8-27>.
- Gavin, N.I., Gaynes, B.N., Lohr, K.N., Meltzer-Brody, S., Gartlehner, G., Swinson, T., 2005. Perinatal depression: a systematic review of prevalence and incidence. *Obstetrics and Gynecology* 106, 1071–1083. <http://dx.doi.org/10.1097/01.AOG.0000183597.31630.db>.
- Henderson, J., 2015. Sixteen per cent of women have depression symptoms in the year after childbirth and are more likely to report physical symptoms, including tiredness and back pain. *Evidence-Based Nursing* 18, 36. <http://dx.doi.org/10.1136/eb-2014-101880>.
- Hildingsson, I.M., 2007. New parents' experiences of postnatal care in Sweden. *Women and Birth: journal of the Australian College of Midwives* 20, 105–113. <http://dx.doi.org/10.1016/j.wombi.2007.06.001>.
- Javadifar, N., Majlesi, F., Nikbakht, A., Nedjat, S., Montazeri, A., 2016. Journey to motherhood in the first year after child birth. *Journal of Family Reproductive Health* 10, 146–153.
- Keeney, S., McKenna, H., Hasson, F., 2011. The Delphi Technique in Nursing and Health Research.
- Lagan, B.M., Sinclair, M., Kernohan, W.G., 2011. A Web-based survey of midwives' perceptions of women using the Internet in pregnancy: a global phenomenon. *Midwifery* 27, 273–281. <http://dx.doi.org/10.1016/j.midw.2009.07.002>.
- Lagan, B.M., Sinclair, M., Kernohan, W.G., 2010. Internet use in pregnancy informs women's decision making: a web-based survey. *Birth* 37, 106–115. <http://dx.doi.org/10.1111/j.1523-536X.2010.00390.x>.
- Lindberg, I., Christensson, K., Ohrling, K., 2009. Parents' experiences of using videoconferencing as a support in early discharge after childbirth. *Midwifery* 25, 357–365. <http://dx.doi.org/10.1016/j.midw.2007.06.002>.
- McKellar, L.V., Pincombe, J.I., Henderson, A.M., 2006. Insights from Australian parents into educational experiences in the early postnatal period. *Midwifery* 22, 356–364. <http://dx.doi.org/10.1016/j.midw.2005.09.004>.
- Monti, F., Agostini, F., Marano, G., Lupi, F., 2008. The course of maternal depressive symptomatology during the first 18 months postpartum in an Italian sample. *Archives of women's mental health* 11, 231–238. <http://dx.doi.org/10.1007/s00737-008-0017-6>.
- Romano, A.M., 2007. A changing landscape: implications of pregnant women's internet use for childbirth educators. *Journal of Perinatal Education* 16, 18–24. <http://dx.doi.org/10.1624/105812407x244903>.
- Salonen, A.H., Kaunonen, M., Astedt-Kurki, P., Järvenpää, A.-L., Isoaho, H., Tarkka, M.-T., 2011. Effectiveness of an internet-based intervention enhancing Finnish parents' parenting satisfaction and parenting self-efficacy during the postpartum period. *Midwifery* 27, 832–841. <http://dx.doi.org/10.1016/j.midw.2010.08.010>.
- Slomian, J., Bruyère, O., Reginster, J.Y., Emonts, P., 2017a. The internet as a source of information used by women after childbirth to meet their need for information: a web-based survey. *Midwifery* 48, 46–52. <http://dx.doi.org/10.1016/j.midw.2017.03.005>.
- Slomian, J., Emonts, P., Vigneron, L., et al., 2017b. Meeting the needs of mothers during the postpartum period: using co-creation workshops to find technological solutions. *JMIR Research Protocols* 6, e76. doi:10.2196/resprot.6831.
- Slomian, J., Emonts, P., Vigneron, L., Acconcia, A., Glowacz, F., Reginster, J.Y., Oumourgh, M., Bruyère, O., 2017c. Identifying maternal needs following childbirth: a qualitative study among mothers, fathers and professionals. *BMC Pregnancy Childbirth* 17, 213–226. <http://dx.doi.org/10.1186/s12884-017-1398-1>.
- Sword, W., Watt, S., 2005. Learning needs of postpartum women: does socioeconomic status matter? *Birth* 32, 86–92. <http://dx.doi.org/10.1111/j.0730-7659.2005.00350.x>.
- Terwee, C.B., Bot, S.D.M., de Boer, M.R., et al., 2007. Quality criteria were proposed for measurement properties of health status questionnaires. *Journal of Clinical Epidemiology* 60, 34–42. <http://dx.doi.org/10.1016/j.jclinepi.2006.03.012>.